

### REMARKS

Claim 1 has been amended to specify that the phosphoric containing arsenic is brought into contact with either “(A) hydrogen halide alone or (B) hydrogen halide in the presence of a compound capable of generating hydrogen halide under acidic conditions, wherein the compound capable of generating hydrogen halide under acidic conditions is a halide of iron (II), copper (I) or tin (II)”. This amendment is supported by the specification on page 7, lines 9-13, and page 8, lines 4-15. Claims 2 and 7-10 have been cancelled. No new matter has been added.

Claims 1, 5 and 6 stand rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over either Hurka or Sakomura. This rejection is respectfully traversed.

As stated above, claim 1 has been amended to claim a method for purifying phosphoric acid which includes bringing phosphoric acid containing arsenic into contact with (A) hydrogen halide alone or (B) hydrogen halide in the presence of a compound capable of generating hydrogen halide under acidic conditions, wherein the compound capable of generating hydrogen halide under acidic conditions is a halide of iron (II), copper (I) or tin (II).

Hurka discloses a method for removing arsenic from phosphoric acid by flowing phosphoric acid bearing small amounts (less than 0.2%) over a copper surface in order to deposit arsenic on the copper surface (See Hurka p. 1, col 1, ll. 27-51). Sakomura discloses a method of removing iron and arsenic from crude phosphoric acid. The method includes mixing the crude phosphoric acid with hydrochloric acid and then contacting the mixture with a strongly basic anion exchange resin to adsorb substantially all of the iron impurity and a portion of the arsenic impurity. (See Sakomura, Abstract).

Neither Hurka nor Sakomura disclose a method of purifying phosphoric acid by contacting the phosphoric acid with a hydrogen halide alone as presently claimed. Hurka contacts the phosphoric acid with a copper surface in addition to hydrochloric acid to remove the arsenic. Sakomura contacts the phosphoric acid with an anion exchange resin in addition to

hydrochloric acid to remove the arsenic. Accordingly, Hurka and Sakomura remove arsenic by deposition or adsorption onto a compound other than hydrogen halide.

Applicants have that arsenic can be removed without the need for a deposition or adsorption compound. Specifically, applicants have found that arsenic itself can become reducible and volatile and, therefore, can be removed without the need for a deposition or adsorption compound (See page 8, line 16-25, of the specification).

Further, neither Hurka nor Sakomura disclose contacting the phosphoric acid with hydrogen halide in the presence of a halide of iron (II), copper (I) or tin (II) as presently claimed. Since Hurka and Sakomura fail to disclose the claimed method, claim 1 should be allowed. Claims 5 and 6, which depend from claim 1, should be allowed for at least the same reasons.

Claim 2-4 stand rejected under 35 USC 103(a) as being unpatentable over Hurka or Sakomura in view of Lowe '098 or Lowe '082. This rejection is respectfully traversed. Claim 2 has been cancelled. Claims 3 and 4 have been amended to depend from claim 1.

As discussed above, neither Hurka nor Sakomura disclose a method of purifying phosphoric acid by contacting the acid with hydrogen halide alone or hydrogen halide in the presence of a halide of iron (II), copper (I) or tin (II) as presently claimed.

Lowe '098 and Lowe '082 relate to the purification of phosphoric acid, wherein arsenic is removed by heating the acid with chloride. The chloride used in Low '098 and Lowe '082 is sodium chloride. Lowe fails to disclose a method of removing arsenic using a hydrogen halide. Accordingly, Lowe '098 and Lowe '082, like Hurka and Sakomura, fail to disclose a method of purifying phosphoric acid by contacting the acid with hydrogen halide alone or in the presence of a halide of iron (II), copper (I) or tin (II) as presently claimed. Since claim 3 and 4, which depend from claim 1, include these limitations, claims 3 and 4 should be allowed.

Claims 7-10 stand rejected under 35 USC 102(b) as anticipated by, or in the alternative under 103(a) as obvious over either Segrist or Schrodter. Claims 7-10 have been cancelled. Accordingly, this rejection is moot.

For the foregoing reasons, a notice of allowance allowing claims 1 and 3-6 is solicited.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952 (358362010300).**

Dated: October 15, 2003

Respectfully submitted,

By: 

Jonathan Bockman  
Registration No. 45,640  
Morrison & Foerster LLP  
1650 Tysons Boulevard  
Suite 300  
McLean, Virginia 22102  
Telephone: (703) 760-7769  
Facsimile: (703) 760-7777